

KENTUCKY CERTIFICATION NEWSLETTER

January 2009

The Division of Compliance Assistance Proposed to Amend Wastewater Certification Regulation

The Division of Compliance Assistance has proposed to amend 401 KAR 5:010 to remove all certification requirements from this chapter and reestablish operator certification standards into a new chapter of Title 401. The proposed amendment will restructure the current regulation into multiple regulations.

The division, in consultation with the Kentucky Board of Certification of Wastewater System Operators and certification program staff, has proposed several significant changes to the current regulation. An overview of these changes is listed below.

401 KAR 11:001 Establishes definitions applicable to the certification of wastewater operators.

401 KAR 11:010 Establishes the duties of the Kentucky Board of Certification of Wastewater System Operators.

401 KAR 11:020 Establishes standards for the performance of certified wastewater operator duties.. Previously, these were implied but not specified.

401 KAR 11:030 Establishes classification of wastewater treatment and collection operator certifications and establishes the qualifications for certification. In addition, it proposes a Class I Treatment Operator in Training certification and a Class I Collection System Operator in Training certification. These certifications will allow individuals without experience to test for and then operate under a "probationary license." The operator must meet the education requirements. The operators will be required to acquire the mandatory experience before the end of the license period or they will be required to retest to retain their license. Operators that acquire the mandatory experience will be allowed to renew their license without the OIT designation.

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Proposed to Amend Wastewater Certification Regulations (cont.)

401 KAR 11:050 proposes to change the duration of the limited certification from 1 year to 2 years. It also proposes to require passage of a Class I test rather than an inspector-facilitated test. Limited certificate holders would also be required to obtain 12 hours of approved continuing education every two years. No hours were previously required.

401 KAR 11:050 proposes to change the timeline for the termination of expired licenses from four years to six months. This is consistent with the current limited certification regulations. This regulation also contains the revised necessary programmatic forms.

401 KAR 11:050 and 11:010 proposes to remove the concept of process/non-process and will limit the types of classes the board can approve to "core content" items. Core content items will be defined by the board and reviewed at least annually. ABC's Need-to-Know Criteria will be utilized as a guide when defining the core content.

401 KAR 11:060 proposes to raise fees. This fee increase is essential in ensuring the agency can continue to implement the certification program and continue to offer regionally distributed testing and training services.

A public comment hearing was held on Aug. 21, 2008. The "Amended After Comments" regulations and a Statement of Consideration addressing all comments received, were submitted on Oct. 14. The regulations are currently scheduled to be reviewed by the appropriate legislative committees during January and February. It is anticipated that these regulations will go into effect in mid-February.

We encourage each of you to review the proposed regulations. These regulations can be found at www.dca.ky.gov/certification.

PROGRAM ANNOUNCEMENTS**Wastewater Certification Renewal****Period Delayed**

Due to pending modifications of the wastewater operator certification regulations, the wastewater certification renewal period will not begin until mid-February. Continuing education hours that expire during the months of January and February 2009 will be extended until March 31, 2009. You may visit the division's Web site at www.dca.ky.gov/certification for updates or by contacting us at 502-564-0323.

2009 Certification and Licensing Catalog

The 2009 Certification and Licensing Catalog will be placed on the division's Web site in mid-February. The current training schedule, forms and other pertinent information related to the certification program can be found on the division's Web site at www.dca.ky.gov/certification.

Drinking Water Regulation Revisions Filed

On Jan. 9, the Division of Water filed revisions to 401 KAR 8:040 and 401 KAR 8:050. The regulation revisions for 401 KAR 8:050 affect certified drinking water treatment and distribution operators. In this regulation, we are proposing to increase the drinking water operator fees to the same level that we have proposed for wastewater operators.

Information regarding the proposed revisions can be located at: <http://www.lrc.state.ky.us/home.htm>.

Staff Retirements

The certification program had two staff members to retire. Sam Lester, one of the program's wastewater trainers, retired in August with over 27 years of service. Sam spent his entire career with the Department for Environmental Protection. He started as an Environmental Specialist and held many valuable positions with the Division of Water and the Division of Compliance Assistance throughout his career. His expertise and knowledge cannot be replaced. We wish him a great retirement and many happy science projects with his granddaughter!

Andy Gentry retired on September 1 with over 21 years of service. Andy started with the Division of Forestry and had been with the Department for Environmental Protection since 1982. For many of those years, he was the only trainer for the water certification program. We wish him many happy days on the golf course; he has earned them.

The certification program owes both of these dedicated professionals much of the credit for the caliber of operators in the profession of water treatment, distribution and wastewater treatment in Kentucky. These talented and knowledgeable trainers will be missed. The public health and safety of the citizens of the commonwealth and its environment have been well-protected by both.

FRANKFORT TESTING DATES

DATE	LOCATION
Feb. 6, 2009	300 Fair Oaks Lane
April 10, 2009	300 Fair Oaks Lane
May 8, 2009	300 Fair Oaks Lane
July 10, 2009	300 Fair Oaks Lane
Aug. 7, 2009	300 Fair Oaks Lane
Oct. 9, 2009	300 Fair Oaks Lane
Nov. 20, 2009	300 Fair Oaks Lane

Lodging Discounts for Operators

The Certification and Licensing Program and the Kentucky Department of Parks have teamed up to offer lodging discounts to operators who attend the programs' certification training. A special rate of \$59.95 per room/night will be available to operators who reference **Code EEC9** when making reservations at the state parks. Reservations should be made as soon as possible as the block of rooms will be released 30 days out from the date of training.

FREE Technical Assistance **Available Through Environmental Compliance Assistance Program**



Did you know that the Division of Compliance Assistance offers free compliance assistance? Our services are available to all individuals, communities and businesses regulated by the department. We want to help you succeed!

Call us toll-free at: **1-800-926-8111**

QUENCH—The Drinking Water Certification Section

History of Water

By James Laughlin
Editor and Associate Publisher
Complete article published in *World of Water 2000*

Since the beginning of recorded time, people have been searching for ways to improve the quality and safety of the water they drink. While some may think at the dawn of a new millennium that we have found the answers to making water safe, in fact, all we have done is refine techniques that have been in use since before the dawn of the last millennium.

By 2000 B.C., people in India were filtering water through charcoal and storing it in copper containers to maintain freshness. Boiling to improve the quality of water has been employed from the beginning of civilization. Filtration through porous vessels and even filtration with sand and gravel have been prescribed for thousands of years. In his writings on public hygiene, Hippocrates (460-354 B.C.) recommended that water be boiled and strained before drinking. The cloth bag that he recommended for straining later became known as "Hippocrates' sleeve."

As Frederick W. Pontius, P.E., U.S. EPA points out in his introduction in the History of the Safe Drinking Water Act (SDWA), "To be safe for human consumption, drinking water must be free from organisms capable of causing disease. It must not contain minerals and organic substances at concentrations that could produce adverse physiological effects. Drinking water should be aesthetically acceptable; it should be free from apparent turbidity, color, and odor and from any objectionable taste. It should also have a reasonable temperature. Water meeting these conditions is termed potable."

Early Filtration Systems

One of the first steps for purifying water was filtration. Paintings from an Egyptian tomb built during the reign of Amenophis II in the 15th century B.C. depict men using wick siphons to siphon off either water or settled wine. Another painting in the tomb of Rameses II, built in the 13th century B.C., shows assorted wick siphons in an Egyptian kitchen.

Venice was one of the first modern cities to be largely supplied with filtered water. Because it was built on islands, Venice depended on catching and storing rainwater in cisterns. Many of the cisterns were surrounded by sand filters and were designed so that the rainwater would pass down and through the sand and then back up into a central reservoir from which the water was drawn.

The Austro-Turkish War of 1685 led Luc Antonio Porzio to write a book on conserving the health of soldiers in camps and was probably the first published treatise on mass sanitation. He proposed a system of multiple filtration through sand, preceded by straining and sedimentation. In his design, the filters could be placed in the hull of a boat. In one illustration, he showed three pairs of filters, each pair consisting of a downward flow filter and an upward flow filter. Water entered the first or settling compartment of the boat through a perforated plate acting as a strainer. The top or clearest water in the settling compartment flowed through two funnels in the top of a partition, passed down through the first sand filter, out through oblong openings in the bottom of a second partition and up through the second filter. The water then flowed through two additional pairs of filters before being used.

In the 18th century, several attempts were made to commercialize filtration in France, the first about 1750, by patenting, manufacturing and selling filters for household use. Most of the water filtered in Paris up to the end of the 19th century was sold in containers and was carried home or delivered by porters. Only a little was piped to houses. Sponge, then charcoal and then wool were promoted as filtering media in France for more than a century from 1745 onward. The first known filter to supply water to a whole town was completed in Paisley, Scotland, in 1804, but the water was carted to consumers. At Glasgow in 1807, filtered water was piped to consumers by one water company, and immediately after by a rival. In 1810, one of the companies built the earliest recorded filter gallery for water supply.

Rapid Filtration

Rapid filtration became the dominant filtration system in the United States in the late 1800s. Most operated under considerable pressure, with water being pumped from the source through a closed filter tank and on into the distribution mains. The filters often featured reverse-flow wash, revolving sand agitators or stirrers and jets of water on or just below the surface to keep the sand agitated during the cleaning cycle.

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History of Water (cont.)

Filtration and Disease

During the late 1800s as improvements were being made to filtration systems, the germ theory of disease became firmly established as a result of research by Louis Pasteur, Robert Koch and others. In 1884, Koch isolated the causal agent of cholera, *Vibrio cholera*.

In the United States, cholera was not a problem after the mid-19th century, but typhoid fever continued to kill thousands each year. In England, William Budd had shown by the mid-19th century that typhoid fever was a contagious disease. The causal agent, now called *Salmonella typhi*, was isolated and identified by Eberth in 1880 and Gaffky in 1884.

Sedimentation, Clarification

Sedimentation as a form of water treatment has been practiced for thousands of years. The Roman city of Laodicea was one of the earliest cities to have settling reservoirs to clarify a turbid water supply.

The first recorded modern-era sedimentation was described in 1804 by Henry C. Englefield. The system served a large town in Switzerland and was built in the late 1700s. It featured a basin divided by a series of under-and-over baffles. One important technological advance which made water filtration adaptable to even turbid sources of water was the use of chemical/coagulation filtration processes, patented about 1884, by the brothers J.W. and I.S. Hyatt.

Coagulation agents have been used for centuries to aid the sedimentation process. One of the earliest known systems included the use of almonds. The process was described by Prospero Alpino, Italian botanist and physician, in a late 16th-century book on Egyptian medicine. In the mid-1890s, the Louisville Water Company, Louisville, Kentucky, combined coagulation with rapid sand filtration, significantly reducing turbidity and bacteria in its water. The Louisville studies refined the knowledge of the process and showed the need for pretreatment, including sedimentation, for Ohio River water.

Disinfection

Disinfection in one form or another has been practiced for thousands of years, with boiling the preferred method for centuries. Other germ-killing agents used down through the ages have included copper, silver, chlorine, ozone and ultraviolet radiation.

In 1896, William M. Jewell applied chlorine gas to drinking water during a filter testing program in Louisville, Kentucky. He generated chlorine gas by passing a 24-volt DC current through a brine solution. The first full-scale application of liquid chlorine for water disinfection was begun in 1912 at the Niagara Falls filter plant of the Western New York Water Co.

One of the first utilities in the United States to adopt UV as a disinfectant was Henderson, Kentucky, in 1916. The system operated until about 1923.

Conclusion

While many of the major milestones in the history of water treatment occurred in the 1800s and early 1900s, the industry has continued to evolve and refine the process of water treatment. The pace of invention and innovation in the 20th century has far outstripped all developments that have occurred over the centuries.

Drinking Water Math

Can you solve these water math problems?

1. Calculate the backwash flow required in gallons per minute to backwash a 10-foot wide by 15-foot long filter if the desired backwash flow rate is 20 gallons per minute per square foot.
2. A rectangular settling basin is 18 feet long, 8 feet wide, and the water is 4 feet deep. It treats a flow of 50,000 gallons per day. Estimate detention time or settling time in hours in the basin for this flow.

See page 7 for answers.

2009 DRINKING WATER TRAINING SCHEDULE		
DATE	LOCATION	TYPE
Jan. 8-9, 2009	General Butler SRP	Bottled Water (DW 6285)
Jan. 13-16, 2009	Carter Caves SRP	Distribution Cert. School (DW 6286)
Feb. 9-12, 2009	Rough River SRP	Groundwater Treatment Cert. School (DW 6288)
Feb. 24-25, 2009	Greenbo Lake SRP	Surface Water Treatment Operations and Maintenance (DW 6289)
March 9-10, 2009	Buckhorn Lake SRP	Trenchless Technology (DW 6290)
March 23-26, 2009	Lexington Center & Hyatt Regency, Lexington	Surface Water Treatment Cert. School (DW 6291)
April 8-9, 2009	Kentucky Dam Village SRP	Groundwater Operations and Maintenance (DW 6292)
April 21-24, 2009	300 Fair Oaks Ln., Frankfort	Distribution Cert. School (DW 6293)
May 6-7, 2009	Pine Mountain SRP	Operator Forum (DW 6294)
May 19-22, 2009	Blue Licks SRP	Surface Water Treatment Cert. School (DW 6295)
June 9-12, 2009	Kentucky Dam Village SRP	Groundwater Treatment Cert. School (DW 6296)
June 23-24, 2009	Jenny Wiley SRP	Bottled Water (DW 6297)
July 8-9, 2009	Pennyrile Forest SRP	Distribution Operations and Maintenance (DW 6298)
July 21-24, 2009	Kenlake SRP	Distribution Cert. School (DW 6299)
Aug. 4-7, 2009	300 Fair Oaks Ln., Frankfort	Surface Water Treatment Cert. School (DW 6300)
Aug. 19-20, 2009	Barren River SRP	Alternative Treatments (DW 6301)
Sept. 9-10, 2009	Buckhorn Lake SRP	Math (DW 6302)
Sept. 21-22, 2009	300 Fair Oaks Ln., Frankfort	Cross Connections (DW 6303)
Sept. 24-25, 2009	Rough River SRP	Emerging Contaminants (DW 6304)
Oct. 7-8, 2009	Lake Cumberland SRP	Operator Forum (DW 6305)
Oct. 20-23, 2009	Jenny Wiley SRP	Groundwater Treatment Cert. School (DW 6306)
Nov. 3-6, 2009	Cumberland Falls SRP	Distribution Cert. School (DW 6307)
Nov. 17-18, 2009	300 Fair Oaks Ln., Frankfort	Capacity Development (DW 6308)
Dec. 9-10, 2009	Carter Caves SRP	Regulations (DW 6309)
Dec. 15-18, 2009	General Butler SRP	Surface Water Treatment Cert. School (DW 6310)

Answers to water math questions from page 5

1. Calculate the surface area of the filter

$$\begin{aligned}\text{Area, sq ft} &= (\text{Length, ft}) (\text{Width, ft}) \\ &= (15 \text{ ft}) (10 \text{ ft}) \\ &= 150 \text{ sq ft.}\end{aligned}$$

Calculate the backwash flow in gallons per minute.

$$\begin{aligned}\text{Backwash Rate} &= \frac{\text{Backwash Flow, GPM}}{\text{Surface Area, sq ft}} \\ \text{GPM/sq ft} &= \frac{\text{Backwash Rate, GPM}}{\text{Surface Area, sq ft}} \\ \text{Backwash flow} &= (\text{Backwash rate, GPM/sp ft}) (\text{Surface Area, sq ft}) \\ &= (20 \text{ GPM/sq ft}) (150 \text{ sq ft}) \\ &= 3,000 \text{ GPM}\end{aligned}$$

2. Calculate the basin volume in gallons.

$$\begin{aligned}\text{Basin Volume, cu ft} &= (\text{Length, ft}) (\text{Width, ft}) (\text{Depth, ft}) \\ &= (18 \text{ ft}) (8 \text{ ft}) (4 \text{ ft}) \\ &= 576 \text{ cu ft}\end{aligned}$$

$$\begin{aligned}\text{Basin volume, gal} &= \frac{(\text{Basin Volume, cu ft}) (7.48 \text{ gal/cu ft})}{\text{Flow, gal/day}} \\ &= \frac{(576 \text{ cu ft}) (7.48 \text{ gal/cu ft})}{50,000 \text{ gal/day}} \\ &= 4,308\end{aligned}$$

Calculate the detention time in hours.

$$\begin{aligned}\text{Detention Time, hr} &= \frac{(\text{Basin Volume, gal}) (24 \text{ hr/day})}{\text{Flow, gal/day}} \\ &= \frac{(4,308 \text{ gal}) (24 \text{ hr/day})}{50,000 \text{ gal/day}} \\ &= 2.07 \text{ hr}\end{aligned}$$

SWIRL – The Wastewater Certification Section

Division of Water's Wet Weather Section

Addresses Collection System Noncompliance

As the era of plentiful federal construction grant dollars becomes a mere memory in the world of municipal financing, and sewer utilities experience the effects of aging on their sewer collection and transmission systems, sewer overflows have become commonplace in many urban areas. Local governments, public works entities and sewer agencies are increasingly unsuccessful in their attempts to properly operate and maintain sewer lines and associated facilities, with the result often being rampant, widespread and predictable overflows of raw wastewater during wet weather events as inflow and infiltration (I/I) occur both on the public and private side of the sewer tap, consuming valuable treatment capacity and depositing millions of gallons of untreated wastewater throughout the urban landscape, contributing to human health problems and environmental degradation, particularly in and around urban waterways.

As overflows from sanitary sewers become more frequent, of greater duration and more voluminous, government regulators, in an attempt to protect public health and the environment, have ascribed greater importance and urgency to corrective actions by sewer utilities. The U.S. Environmental Protection Agency developed a Combined Sewer Overflow (CSO) policy in 1989, and enhanced that policy in 1994. A Management, Operations and Maintenance (MOM, later to become known as CMOM with the addition of a Capacity strategy) Program, a series of asset management objectives, was put in place to prevent the worsening of Sanitary Sewer Overflows (SSOs). Several permitting, compliance and enforcement initiatives have been launched in succeeding years, calculated to prevent and eliminate both CSOs and SSOs, and in 2005, a federal-state enforcement action resulted in the negotiation of a Consent Decree among the U.S. Department of Justice (DOJ), U.S. Environmental Protection Agency (EPA), the Kentucky Environmental and Public Protection Cabinet (EPPC) and the Louisville and Jefferson County Metropolitan Sewer District (MSD).

Shortly thereafter, a federal-state consent agreement was negotiated with Sanitation District #1 of Northern Kentucky, and the commonwealth put together a legal, technical and administrative negotiating team and developed CSO/SSO consent judgments between Kentucky and the communities of Ashland, Catlettsburg, Frankfort, Harlan, Henderson, Loyall, Maysville, Morganfield, Owensboro RWRA, Paducah JSA, Pikeville, Pineville, Prestonsburg, Vanceburg and Worthington. The technical component of that negotiating team began concentrating on CSOs, SSOs and related wet weather collection system compliance issues, and the Division of Water's wet weather program was born in the KPDES Branch. The recent reorganization in DOW created a new Wet Weather Section in the Surface Water Permits Branch, which among other duties, monitors compliance with those 17 consent agreements, deals with wet weather collection system noncompliance in communities and systems that have no CSOs and administers certain facets of the stormwater program, particularly the MS4 program.

Currently, and continuing well into 2009, members of the Wet Weather Section are performing reviews of compliance reports submitted by Kentucky's CSO communities pursuant to their consent agreements with the commonwealth: Sewer Overflow Response Protocols (SORPs); Sanitary Sewer Overflow Plans (SSOPs); Nine Minimum Controls (NMC), a series of technology-based actions or measures designed to reduce CSOs and their effects on receiving water quality; Capacity, Management, Operation and Maintenance (CMOM), a collection of asset management strategies calculated to prevent or minimize sewer overflows; and Long-Term Control Plans (LTCPs), which may incorporate one of two approaches, **demonstrating** that its plan is adequate to meet the water quality-based requirements of the Clean Water Act (CWA), i.e., the "demonstration approach," or the "presumption approach," which implements a minimum level of treatment that is **presumed** to meet the water quality-based CWA requirements. These reviews are being conducted with the application of federal guidance and with input from EPA Region IV, but it is Kentucky's responsibility to serve as

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2009 WASTEWATER TRAINING SCHEDULE

DATE	LOCATION	TYPE
Jan. 6-9, 2009	General Butler SRP	Cert. School (WW 5418)
Feb. 11-12, 2009	Cumberland Falls SRP	Package Treatment Plants and Math Review (WW 6311)
March 10-11, 2009	Buckhorn SRP	Basic Concepts of Wastewater Biology and Math Review (WW 6312)
March 23-26, 2009	Lexington Center & Hyatt Regency, Lexington	Cert. School (WW 5419)
April 6-9, 2009	Kentucky Dam Village SRP	Cert. School (WW 5420)
May 6-7, 2009	Pine Mountain SRP	Package Treatment Plants and Math Review (WW 5421)
May 27-28, 2009	Blue Licks SRP	Sludge & Solids and Math Review (WW 6313)
June 9-12, 2009	Kenlake SRP	Cert. School (WW 6314)
June 23-25, 2009	Jenny Wiley SRP	Collection Systems, Basic Concepts of WW Biology and Math Review (WW 6315)
July 21-22, 2009	Kenlake SRP	Basic Concepts of Wastewater Biology and Math Review (WW 6316)
Aug. 18-21, 2009	Barren River SRP	Cert. School (WW 6317)
Sept. 1-4, 2009	Jenny Wiley SRP	Cert. School (WW 6318)
Sept. 30 - Oct. 1, 2009	Kentucky Dam Village SRP	Sludge & Solids and Math Review (WW 6319)
Oct. 20-23, 2009	Rough River SRP	Cert. School (WW 6320)
Nov. 17-18, 2009	Lake Barkley SRP	Package Treatment Plants and Math Review (WW 6321)
Dec. 8-11, 2009	Dale Hollow SRP	Cert. School (WW 6322)

Test your wastewater math skills.

Can you solve these two wastewater math problems?

1. Two lagoons 700 ft. by 500 ft., operated in parallel, are receiving an organic load of 203.8 mg/l of BOD₅ from a community of 1,700 people. What is the organic load in pounds of BOD₅ per acre per day?
2. If the flow at a treatment plant is 1.75 MGD, what chlorine residual would be expected if the chlorinator is set on 125 lb/CL₂/day and the CL₂ demand is 7mg/l?

See page 11 for answers.

Collection System Noncompliance (Continued from page 8)

the primary review agency and to ultimately approve or disapprove these reports. Moreover, the Wet Weather Section is conducting CSO inspections jointly with DOW's regional office staff to ensure that the 17 CSO communities continue to make progress as they seek to eliminate CSOs.

In addition to CSOs, many communities around the commonwealth experience wet weather capacity and compliance challenges, with I/I of storm water (and snow melt) entering into sanitary sewers, creating SSOs and using up available collection, transmission and treatment capacity. To address those non-CSO issues, the Wet Weather Section has begun to interact with communities experiencing wet weather compliance problems. Starting with recommendations from field inspectors and supervisors, meetings are set up at the regional offices, wherein the Wet Weather Section and field staff assist communities with diagnostic evaluations and remedial guidance with respect to wet weather issues. Subsequent to the initial meeting, a member of the section follows up to provide technical advice and assistance to the permitted community, receiving and evaluating periodic progress reports and otherwise assisting the permittee as needed with its goal of eliminating wet weather problems in its sewer system. Meetings were held in 2008 at regional offices in Morehead, Columbia, Bowling Green, Paducah and Louisville, and approximately 70 communities have been added to DOW's wet weather database via this route. Meetings in Florence, Hazard, London, Madisonville and Frankfort are expected to yield an additional 50 communities, which will systematically attempt to proactively remediate wet weather compliance problems.

Certainly, funding is needed to support many of these efforts, but most of these permittees have demonstrated measurable progress as they upgrade pump stations, rehabilitate manholes, repair line leaks, correct I/I, enforce their sewer use ordinances, expand treatment works and otherwise improve the capacity and efficiency of their wastewater systems.

(NOTE: Questions? Call the Wet Weather Section in the Surface Water Permits Branch, Division of Water [502-564-3410].)

Miscellaneous Items of Interest

- The Certification and Licensing Program has revised all required forms for certification. The current forms will no longer be valid in mid-February. The new forms will be required soon after the regulations go into effect.
- We would like to note that the certification program has not increased the fees associated with our training program.



**EQUATIONS FOR WASTEWATER MATH PROBLEMS
FROM PAGE 9**

1. Organic loading formula:

Organic load/lbs/BOD₅/Day/Acre

$$\frac{\text{Lbs/BOD}_5/\text{Day}}{\text{Area/Acres}}$$

$$\text{Lbs BOD}_5 = \text{Flow/mgd} \times 8.34 \times \text{mg/l/BOD}_5$$

$$\text{Flow} = 1,700 \text{ pop} \times 100 \text{ gal/day/person} = 170,000 \text{ gpd}$$

$$\text{Convert } 170,000 \text{ to mgd} = 17 \text{ mgd}$$

$$0.17 \text{ mgd} \times 8.34 \times 203.8 \text{ mg/l} = 288.9 \text{ lbs/day}$$

Area in Acres

$$\frac{\text{Length ft} \times \text{width ft} \times 2 \text{ lagoons}}{43,560 \text{ ft}^2/\text{Acre}}$$

$$700 \text{ ft} \times 500 \text{ ft} \times 2$$

$$\frac{700,000 \text{ ft}^2}{43,560 \text{ ft}^2}$$

$$16 \text{ Acres}$$

$$\frac{288.9 \text{ lbs BOD}_5/\text{day}}{16 \text{ acres}}$$

$$18.05 \text{ lbs BOD}_5/\text{Acre/day}$$

2. TRC Formula = Dosage/mg/l—CL₂ demand

$$\frac{125}{175 \text{ MGD} \times 8.34}$$

$$\frac{125}{14.595} = 8.56 \text{ mg/l}$$

$$8.56 \text{ mg/l} - 7.0 \text{ mg/l} = 1.56 \text{ mg/l}$$

So how did you do? Were these problems helpful? Let us know if you would like to see additional problems in future issues of this newsletter. You may do so by sending an e-mail to julia.kays@ky.gov.

Certified Operator Disciplinary Actions

The Department for Environmental Protection, in consultation with the Kentucky Board of Certification of Wastewater System Operators and the Kentucky Board of Certification of Drinking Water Treatment and Distribution System Operators, took disciplinary action against three certified operators during the last few months. An overview of these actions is listed below.

Case 1

It was determined during the investigation and enforcement process that a Class II wastewater system operator from Green County did not use reasonable care or judgment in the performance of duties and failed to apply knowledge in the performance of duties. This determination led to the permanent revocation of the operator's Class II wastewater license and the person had to publish a half-page public apology letter in the local newspaper.

Case Closed

Case 2

It was determined that a Class III wastewater operator from Bullitt County practiced fraud or deception in obtaining a Class III wastewater certification and willfully violated the requirements of KRS Chapter 224 and 401 KAR Chapter 5. The operator's Class III wastewater license was revoked for a period of one year and his Class II wastewater license was suspended for that same one-year period. During the one year period, he may not reapply for any other wastewater certification. At the end of the one year, he may reapply for a Class III wastewater certification.

Case is still active pending appeal.

Case 3

The department determined that a Class IBD drinking water operator from Hickman County did not use reasonable care or judgment in the performance of his duties; failed to apply ability in the performance of duties; and willfully violated the requirements of Chapters 223 and 224 and 401 KAR Chapter 8. The operator's license was permanently revoked.

Case is still active pending appeal.

*Note—Although all cases listed above have gone through the enforcement process, not all cases are closed at this time.

**New and Upgraded Licenses
1/1/08—11/30/08**

Alt#	Operator Name	License Type	Issued
76604	Glenn McIntosh	DW Distribution I	06/17/2008
78029	Steven D Thornton	DW Distribution I	09/17/2008
82591	James T White	DW Distribution I	09/17/2008
83399	James L Webb	DW Distribution I	09/17/2008
98383	Marvin I McKenzie	DW Distribution I	10/20/2008
98769	Ellery D Arnett	DW Distribution I	06/17/2008
99286	Repts D Watkins	DW Distribution I	02/04/2008
99486	Edward J Ignagni	DW Distribution I	04/03/2008
99553	David S Blackburn	DW Distribution I	09/17/2008
99557	Charles W Hensley	DW Distribution I	04/28/2008
99954	Elwood B Watts	DW Distribution I	10/20/2008
100378	Joseph S Harris	DW Distribution I	05/17/2008
100494	Johnny E Ruark	DW Distribution I	10/20/2008
100495	Danny W McIntyre	DW Distribution I	10/20/2008
100745	Alan M Swinford	DW Distribution I	10/20/2008
100746	Brian L Hall	DW Distribution I	09/17/2008
100885	Stanley Douglas	DW Distribution I	09/17/2008
101446	Charles D Bryant	DW Distribution I	10/20/2008
101575	Michael D Stanton	DW Distribution I	09/17/2008
101617	Cody A Gowins	DW Distribution I	09/17/2008
101860	Steven L Hackworth	DW Distribution I	10/20/2008
102089	Roger F Shrum	DW Distribution I	10/20/2008
26181	Lee R Barnett	DW Distribution II	06/17/2008
26816	John Smith IV	DW Distribution II	06/17/2008
27802	Darren C Winders	DW Distribution II	10/20/2008
27822	Christopher Francis	DW Distribution II	04/28/2008
28475	Roberta F Newsome	DW Distribution II	08/04/2008
29328	Christopher G McClain	DW Distribution II	04/28/2008
31182	Kenneth J Massey	DW Distribution II	06/17/2008
31949	Wilton W Embry	DW Distribution II	06/17/2008
32061	Gregory T Williams	DW Distribution II	04/28/2008
32567	Quentin Brite	DW Distribution II	06/17/2008
34403	Gary B Hardesty	DW Distribution II	06/17/2008
44402	Jeffrey A Woolridge	DW Distribution II	04/21/2008
47010	Nathan E Gassaway	DW Distribution II	04/28/2008
53808	Jason E Back	DW Distribution II	04/28/2008
71329	Harry G Anness	DW Distribution II	04/28/2008
71742	Maurice Mills	DW Distribution II	04/28/2008
75876	Chase T Gregory	DW Distribution II	10/20/2008
77843	Brad M Thomas	DW Distribution II	10/20/2008
82065	Brandon J Marksberry	DW Distribution II	04/28/2008
83119	Jayce T Shepperd	DW Distribution II	06/17/2008
83402	Donald R Murphy	DW Distribution II	06/17/2008

Alt#	Operator Name	License Type	Issued
83536	William E Anderson	DW Distribution II	09/17/2008
83538	Timothy L Grey	DW Distribution II	02/04/2008
83564	James A Bennett	DW Distribution II	06/17/2008
84555	Benjamin W Rudd	DW Distribution II	06/17/2008
84891	Donald D Roark	DW Distribution II	06/17/2008
85084	Stephen K Allen	DW Distribution II	06/17/2008
85340	Casey M Allen	DW Distribution II	04/28/2008
96748	David D Shrout	DW Distribution II	06/17/2008
97343	Christopher K Reynolds	DW Distribution II	09/17/2008
98102	Daniel J Montgomery	DW Distribution II	04/28/2008
99110	William K Wheeler	DW Distribution II	04/28/2008
99410	Robert W Stepp	DW Distribution II	04/28/2008
99487	Stephen A Adams	DW Distribution II	09/17/2008
99488	Kelly L Logsdon	DW Distribution II	04/28/2008
99490	David C Barger	DW Distribution II	04/28/2008
99847	David S Napier	DW Distribution II	04/28/2008
99848	Tammy R Hendren	DW Distribution II	06/17/2008
100038	Ricky C Copeland	DW Distribution II	06/16/2008
100072	Mike D Sanford	DW Distribution II	05/02/2008
100140	Gregory N Camplin	DW Distribution II	09/17/2008
100141	James A Shoopman	DW Distribution II	06/17/2008
100264	Gilford K Mayhorn	DW Distribution II	06/17/2008
100332	James E Garrett	DW Distribution II	06/17/2008
100580	Brian W Ruffin	DW Distribution II	06/17/2008
101147	Ovie A Firkins	DW Distribution II	09/17/2008
101148	Morris N Hensley	DW Distribution II	09/17/2008
101440	Travis D Casto	DW Distribution II	09/17/2008
101441	Jonathan S Bates	DW Distribution II	09/17/2008
101578	Mark D Matheny	DW Distribution II	10/20/2008
101789	Cody R Kirby	DW Distribution II	10/20/2008
101859	Robert W Crain	DW Distribution II	10/20/2008
101904	James J Canada	DW Distribution II	10/20/2008
102157	Ted A Chisholm	DW Distribution II	10/20/2008
26008	Jeffery G Anderson	DW Distribution III	10/20/2008
26096	Andy R Adkins	DW Distribution III	04/28/2008
26163	John E Chaney	DW Distribution III	04/28/2008
26516	Clarence L Pettyjohn	DW Distribution III	04/28/2008
27035	Daryl S Partin	DW Distribution III	09/17/2008
28387	Clifford J Davis	DW Distribution III	09/17/2008
30367	Jeffery A Smith	DW Distribution III	06/18/2008
31173	Russell J Music Jr	DW Distribution III	04/18/2008
31939	Martha D Bastin	DW Distribution III	04/28/2008
31971	Mark A Barnett	DW Distribution III	06/18/2008

New and Upgraded Licenses (cont.)

Alt#	Operator Name	License Type	Issued
32062	Terry D Russell	DW Distribution III	09/17/2008
33570	Christopher D Deaton	DW Distribution III	11/12/2008
50708	Randy K Kemp	DW Distribution III	04/28/2008
70419	Kimberly M Lane	DW Distribution III	09/17/2008
76211	Jason Phelps	DW Distribution III	10/20/2008
77842	Harold L Cash	DW Distribution III	10/20/2008
79127	Jonathan R Hammond	DW Distribution III	09/17/2008
80105	Jamie L Adams	DW Distribution III	04/28/2008
81007	Jeremy D Worthington	DW Distribution III	06/18/2008
81008	David P Chappelle	DW Distribution III	10/20/2008
81465	Joseph G Renshaw	DW Distribution III	10/20/2008
81701	Ryan D Thomas	DW Distribution III	09/17/2008
81903	Ernest Bowling	DW Distribution III	09/17/2008
82200	Michael D Moseley	DW Distribution III	10/20/2008
98008	Michael S Polley	DW Distribution III	04/28/2008
99290	Brett Bokkon	DW Distribution III	04/28/2008
99708	Jason K Tubb	DW Distribution III	04/28/2008
99713	David L Hampton	DW Distribution III	09/17/2008
101340	Timmy C Walker	DW Distribution III	09/17/2008
101445	Melissa A Melton	DW Distribution III	09/17/2008
101448	George T Emery	DW Distribution III	09/17/2008
101466	Forrest L Pollock II	DW Distribution III	10/20/2008
101552	Joseph T Hayden	DW Distribution III	09/17/2008
101580	Neil E Gordon	DW Distribution III	10/20/2008
24847	Grondall G Potter II	DW Distribution IV	10/20/2008
26110	Timothy D Bowman	DW Distribution IV	10/20/2008
27412	Delmas Ward	DW Distribution IV	04/28/2008
27805	Michael R Brooks	DW Distribution IV	10/20/2008
28020	James N Dossett	DW Distribution IV	04/28/2008
29928	James R Jeffries	DW Distribution IV	09/17/2008
31228	Doyle R Smothers	DW Distribution IV	10/20/2008
31306	Kevin E Marcum	DW Distribution IV	09/17/2008
31834	Jim E Gray	DW Distribution IV	04/28/2008
47127	Lonnie D Banks	DW Distribution IV	08/04/2008
50059	Ronald K Kruchinski	DW Distribution IV	04/28/2008
50688	Timothy V Fitch	DW Distribution IV	04/28/2008
50797	Michael J Walton	DW Distribution IV	09/17/2008
54910	Charles L Green	DW Distribution IV	10/20/2008
71786	Jeffrey N O'Bryan	DW Distribution IV	11/12/2008
74364	Deanna C Lunsford	DW Distribution IV	04/28/2008
97712	Danny R Haring Jr.	DW Distribution IV	04/28/2008
99108	Christopher S Lawson	DW Distribution IV	04/28/2008
99109	Mark J Tischner	DW Distribution IV	10/20/2008
99289	David L Brown	DW Distribution IV	11/12/2008
83312	James P Renfro	DW Treatment IAD	05/19/2008
99330	Jeremy K Moore	DW Treatment IAD	05/19/2008

Alt#	Operator Name	License Type	Issued
99409	Timothy W Baker	DW Treatment IAD	04/07/2008
99471	Jeffrey R Fields	DW Treatment IAD	04/07/2008
99558	Robert C Hughes	DW Treatment IAD	05/19/2008
99583	Terri L Clowes	DW Treatment IAD	04/07/2008
100212	Tim G Geneve	DW Treatment IAD	05/19/2008
100213	Donnie L Baker	DW Treatment IAD	05/19/2008
100265	Melvin D Mitchell	DW Treatment IAD	09/29/2008
101790	Timothy Brandenburg	DW Treatment IAD	09/29/2008
98050	Gerald B Carney	DW Treatment IBD	02/26/2008
27198	James D Butt	DW Treatment IIA	04/07/2008
29400	Jeremy C Lewis	DW Treatment IIA	09/29/2008
48915	Tim P Combs	DW Treatment IIA	04/07/2008
55599	Lawrence D Baker	DW Treatment IIA	05/20/2008
76973	Charles R Tomlin Jr.	DW Treatment IIA	05/20/2008
79695	Rex L England	DW Treatment IIA	11/12/2008
80113	Darrell L Murphy	DW Treatment IIA	02/04/2008
80541	William L Carroll	DW Treatment IIA	02/04/2008
82535	John Q Hays	DW Treatment IIA	04/07/2008
83423	Richard L Carter	DW Treatment IIA	05/20/2008
84076	George L Wells	DW Treatment IIA	05/20/2008
84566	Christopher L Williams	DW Treatment IIA	09/29/2008
84655	Gregory T Pruitt	DW Treatment IIA	09/29/2008
84735	David D Westerfield	DW Treatment IIA	04/07/2008
84902	Jan D Copley	DW Treatment IIA	05/20/2008
84903	Roy N Riddle	DW Treatment IIA	05/30/2008
85031	Nicklous Hedge	DW Treatment IIA	04/07/2008
85033	Edison G Cross	DW Treatment IIA	04/07/2008
85034	Anthony A Areaux	DW Treatment IIA	04/07/2008
85284	Donnie R Osborne	DW Treatment IIA	04/07/2008
96787	Franklin W Thieman II	DW Treatment IIA	09/29/2008
98009	Matthew E Smith	DW Treatment IIA	09/29/2008
99281	James R Eady	DW Treatment IIA	04/07/2008
99568	Gregory A Shouse	DW Treatment IIA	04/07/2008
99707	Jerry T Smith	DW Treatment IIA	04/07/2008
100212	Tim G Geneve	DW Treatment IIA	11/12/2008
100213	Donnie L Baker	DW Treatment IIA	11/12/2008
70667	Adam D Krieg	DW Treatment IIBD	08/25/2008
82874	John R Turner	DW Treatment IIBD	02/25/2008
83496	Stephen S Watts	DW Treatment IIBD	08/25/2008
99287	William D Garrett	DW Treatment IIBD	02/25/2008
25125	Herman D Mergard	DW Treatment IIIA	04/08/2008
26043	Adam S Daugherty	DW Treatment IIIA	05/20/2008
26193	Steve L Hephner	DW Treatment IIIA	04/07/2008
26217	Henry C Williams	DW Treatment IIIA	09/29/2008
26842	Adam B Hunley	DW Treatment IIIA	05/20/2008
27564	Philip Z Milburn	DW Treatment IIIA	04/07/2008

New and Upgraded Licenses (cont.)

Alt#	Operator Name	License Type	Issued
27821	Robert D Melton	DW Treatment IIIA	4/7/2008
28433	Terry L Hill	DW Treatment IIIA	8/4/2008
28456	Thomas J Howard	DW Treatment IIIA	04/07/2008
29400	Jeremy C Lewis	DW Treatment IIIA	11/12/2008
71741	Sam M Johnson	DW Treatment IIIA	05/20/2008
74691	James Rawlings	DW Treatment IIIA	04/07/2008
75052	Chris Obradovich	DW Treatment IIIA	05/20/2008
78501	James D Sims	DW Treatment IIIA	04/07/2008
79789	Charles J Black	DW Treatment IIIA	09/29/2008
80107	Stephen F Clevinger	DW Treatment IIIA	05/20/2008
80508	Jason L Pennell	DW Treatment IIIA	08/04/2008
83422	Turner E Campbell	DW Treatment IIIA	05/20/2008
84800	Jeremy W Troxell	DW Treatment IIIA	05/20/2008
85082	William L Calhoun	DW Treatment IIIA	04/07/2008
97416	Douglas C Johnson	DW Treatment IIIA	09/29/2008
97902	Mark A Brown	DW Treatment IIIA	05/20/2008
99715	Jacob B Speck	DW Treatment IIIA	04/07/2008
99837	Lynn M Foley	DW Treatment IIIA	08/04/2008
100170	Justin W Waters	DW Treatment IIIA	05/20/2008
100923	Raymond B Banks	DW Treatment IIIA	08/04/2008
101388	Jeremy A Stewart	DW Treatment IIIA	09/29/2008
101556	Justin T Dennis	DW Treatment IIIA	09/29/2008
26692	Judy A Stinson	DW Treatment IIIB	08/25/2008
27861	Mike W Garrett	DW Treatment IIIB	11/12/2008
28914	George J Hannah	DW Treatment IIIB	11/12/2008
31027	David A French	DW Treatment IIIB	08/25/2008
32635	Michael L Crouch	DW Treatment IIIB	08/25/2008
46295	Aaron K Hall	DW Treatment IIIB	08/25/2008
75875	Jeremiah S Noles	DW Treatment IIIB	02/25/2008
99422	William Kelley	DW Treatment IIIB	02/25/2008
26186	Corey D Johnson	DW Treatment IVA	05/02/2008
26569	Daniel W Collins	DW Treatment IVA	09/29/2008
26833	Brian D Hunter	DW Treatment IVA	09/29/2008
27500	Earl T Alley	DW Treatment IVA	05/20/2008
27615	Oliver S Bond	DW Treatment IVA	02/04/2008
28475	Roberta F Newsome	DW Treatment IVA	10/30/2008
29466	Carl E Wheeler	DW Treatment IVA	09/29/2008
30214	Terry W Buster	DW Treatment IVA	04/07/2008
30284	Larry R Daniel	DW Treatment IVA	04/28/2008
31173	Russell J Music Jr	DW Treatment IVA	04/18/2008
32332	Bill Bonta	DW Treatment IVA	11/12/2008
32539	Charles I McCollum	DW Treatment IVA	09/29/2008
33312	James F Stephenson	DW Treatment IVA	11/12/2008
33348	James E Knight	DW Treatment IVA	05/20/2008
49081	Ralph D Pittman	DW Treatment IVA	04/07/2008
51234	Adam W Terry	DW Treatment IVA	04/07/2008
54949	Warren D Hinman	DW Treatment IVA	09/29/2008

Alt#	Operator Name	License Type	Issued
70579	Mahmoud A Mohamed	DW Treatment IVA	09/29/2008
78720	Aaryn M Osborne	DW Treatment IVA	05/20/2008
79309	Hendrick A Castle	DW Treatment IVA	05/20/2008
79409	Gidget F Cordial	DW Treatment IVA	09/29/2008
79612	Ray B DeCoursey	DW Treatment IVA	04/07/2008
81009	Jonathan B Scott	DW Treatment IVA	08/15/2008
83569	James A Motzer	DW Treatment IVA	09/30/2008
97902	Mark A Brown	DW Treatment IVA	09/29/2008
99815	Lynn Slater	DW Treatment IVA	11/12/2008
99898	Lisa Thomas	DW Treatment IVA	08/04/2008
101178	David C Frakes	DW Treatment IVA	07/16/2008
101233	Martin L McCoy	DW Treatment IVA	09/29/2008
101557	John Booher	DW Treatment IVA	09/29/2008
26098	Timothy Coy	WW Treatment I	09/19/2008
26970	Marty N Oliver	WW Treatment I	04/22/2008
27719	Allen B McCarty	WW Treatment I	04/28/2008
29037	John Thomas	WW Treatment I	07/23/2008
32646	Michael L Warren	WW Treatment I	09/19/2008
33697	Lisa G Leonard	WW Treatment I	07/23/2008
42347	Raymond S Pollitt	WW Treatment I	06/23/2008
46257	Clavon R Armstrong	WW Treatment I	05/07/2008
78835	Timmy Caudill	WW Treatment I	06/23/2008
79777	Robert K Watson	WW Treatment I	07/23/2008
79835	Devon R Caudill	WW Treatment I	09/18/2008
81141	Lester L Stapleton	WW Treatment I	04/07/2008
85048	David R Cupp	WW Treatment I	01/22/2008
85083	Kerry R Oliver	WW Treatment I	04/22/2008
85409	Harry R Goodman Jr.	WW Treatment I	06/23/2008
85454	Jason Watson	WW Treatment I	06/23/2008
97813	David A Cunningham	WW Treatment I	01/15/2008
98197	Jay S Lawson	WW Treatment I	01/22/2008
98767	Daniel A Edwards	WW Treatment I	01/22/2008
98768	Brian S Chenault	WW Treatment I	01/22/2008
98829	John C Wells	WW Treatment I	09/19/2008
98888	Charles D Nelson	WW Treatment I	01/22/2008
99063	Charles G Singleton	WW Treatment I	05/07/2008
99285	Jeffrey L Byrd	WW Treatment I	04/07/2008
99331	Roger D Humphrey	WW Treatment I	04/22/2008
99357	Justin R Leidolf	WW Treatment I	04/07/2008
99467	Michael R Carrier	WW Treatment I	04/22/2008
99470	Ronald E Seagraves	WW Treatment I	04/07/2008
99553	David S Blackburn	WW Treatment I	05/07/2008
99566	Jason W Stamper	WW Treatment I	09/19/2008
99571	Joey D Hamilton	WW Treatment I	04/07/2008
99598	Dwayne E Duncan	WW Treatment I	06/23/2008
99662	Charles R Asher	WW Treatment I	04/07/2008
99712	Bridget K Stevens	WW Treatment I	04/22/2008

New and Upgraded Licenses (cont.)

Alt#	Operator Name	License Type	Issued
99729	Chris D Kearns	WW Treatment I	04/07/2008
99774	Kenny R Proffitt	WW Treatment I	04/07/2008
99777	Kinnith L Miles	WW Treatment I	04/07/2008
99814	Robert L Thompson	WW Treatment I	04/22/2008
99822	Michael M Hartigan	WW Treatment I	04/22/2008
100142	Charles E Jackson	WW Treatment I	06/23/2008
100167	Shawn M Murphy	WW Treatment I	06/23/2008
100211	Ellis E Anderson III	WW Treatment I	06/23/2008
100255	Christopher M McFarland	WW Treatment I	05/07/2008
100292	Chasity N Rodgers	WW Treatment I	06/23/2008
100293	Bridgett N Blake	WW Treatment I	06/23/2008
100333	James F Trusley	WW Treatment I	09/19/2008
100376	Tony W Tolle	WW Treatment I	06/23/2008
100377	James G Fudge	WW Treatment I	06/23/2008
100379	Antoine L Robinson	WW Treatment I	06/23/2008
100380	Donald F Thomas Jr.	WW Treatment I	09/19/2008
100382	Johnny A Owens	WW Treatment I	09/19/2008
100383	Paul E Blevins	WW Treatment I	06/23/2008
100420	Timothy J Sargent	WW Treatment I	06/23/2008
100493	Paul E Mitchell	WW Treatment I	06/23/2008
100518	Rex A Lashley	WW Treatment I	06/23/2008
100545	Timothy Collett	WW Treatment I	06/23/2008
100646	Carl D Chaffin	WW Treatment I	06/23/2008
100652	Tony R Hobbs	WW Treatment I	07/23/2008
101021	James M Casebier	WW Treatment I	07/23/2008
101023	Jimmy R Sorrels	WW Treatment I	07/23/2008
101062	Clayton B House	WW Treatment I	07/23/2008
101160	Alphonso L Cleaver	WW Treatment I	08/06/2008
101199	Jeremy S West	WW Treatment I	08/06/2008
101200	Tony O Malicote	WW Treatment I	08/06/2008
101243	Arthur D Curry	WW Treatment I	09/19/2008
101389	Tony G Burton	WW Treatment I	09/18/2008
101390	Robert M Williamson	WW Treatment I	09/19/2008
101391	Richard D Draper	WW Treatment I	09/19/2008
101443	Jody L Salisbury	WW Treatment I	09/19/2008
101444	Nathan L Salisbury	WW Treatment I	09/19/2008
101467	Barry K Young	WW Treatment I	09/19/2008
101488	David W Wise	WW Treatment I	09/19/2008
101490	Randy Conley	WW Treatment I	09/18/2008
101491	Derek Bentley	WW Treatment I	09/18/2008
101616	Charles W Runyon III	WW Treatment I	09/19/2008
25917	Martin L Vanderpool	WW Treatment II	09/23/2008
26034	Joseph S Smith	WW Treatment II	07/23/2008
27540	Harold E Helton	WW Treatment II	04/22/2008
27743	Greg W Hall	WW Treatment II	09/22/2008
28638	William E Stevens	WW Treatment II	09/22/2008

Alt#	Operator Name	License Type	Issued
32163	Robert T Adkins	WW Treatment II	04/07/2008
33019	Leonard R Pehm	WW Treatment II	07/23/2008
33209	Anthony W Calhoun	WW Treatment II	01/22/2008
33354	Heidi L Hockensmith-Land	WW Treatment II	01/22/2008
34453	Robert Stanton	WW Treatment II	09/22/2008
70612	Jon A Abney	WW Treatment II	09/22/2008
70667	Adam D Krieg	WW Treatment II	06/23/2008
76119	Bobby C Clark	WW Treatment II	01/22/2008
77822	Brian K Sweazy	WW Treatment II	01/22/2008
79168	William L Jarrell	WW Treatment II	04/08/2008
79698	Roger C Bray	WW Treatment II	02/07/2008
80829	Ronnie J Hensley	WW Treatment II	04/08/2008
81580	Patrick A Jelinek	WW Treatment II	04/08/2008
81726	Nick A Neises	WW Treatment II	04/08/2008
81817	Roger H Pearce Jr.	WW Treatment II	04/08/2008
82591	James T White	WW Treatment II	02/07/2008
83567	Danny R Woosley	WW Treatment II	01/22/2008
83594	Michael L Grigg	WW Treatment II	04/07/2008
83649	Mark Robinson	WW Treatment II	02/07/2008
83656	Daniel C Emerson	WW Treatment II	06/23/2008
83745	Johnathon Crowe	WW Treatment II	07/23/2008
83966	Dennis R Skaggs	WW Treatment II	04/07/2008
84074	Vickie S Francis	WW Treatment II	09/22/2008
84328	Mark Hannold	WW Treatment II	07/23/2008
84368	Boyd M Roland	WW Treatment II	04/07/2008
84708	Christopher D Priester	WW Treatment II	06/23/2008
85123	Gregory W Anderson	WW Treatment II	06/23/2008
96746	Robert L Little	WW Treatment II	06/23/2008
96925	Michael A Scott	WW Treatment II	02/07/2008
97068	Jason A Woosley	WW Treatment II	07/23/2008
97219	William E Greathouse	WW Treatment II	04/07/2008
97329	Mark R Duff	WW Treatment II	09/22/2008
98010	Michael J Mynear	WW Treatment II	01/22/2008
98804	Dale W Burroughs	WW Treatment II	04/07/2008
98887	Harold C Compton	WW Treatment II	01/22/2008
99037	James S Robinson	WW Treatment II	01/22/2008
99292	Allen L Hunter	WW Treatment II	04/08/2008
99468	Jerry L Slone	WW Treatment II	06/23/2008
99469	Daniel D Garriss Jr.	WW Treatment II	06/23/2008
99582	Byron J Scott	WW Treatment II	04/22/2008
99598	Dwayne E Duncan	WW Treatment II	11/12/2008
99952	Donald R Bowman	WW Treatment II	09/22/2008
100169	Jonathan W Ferguson	WW Treatment II	11/12/2008
100517	Theresia L Russell	WW Treatment II	07/23/2008
100647	William R Gossett	WW Treatment II	07/23/2008
100819	James C Key	WW Treatment II	09/22/2008

New and Upgraded Licenses (cont.)

AI#	Operator Name	License Type	Issued
100867	William J Groome	WW Treatment II	07/23/2008
101151	Curtis E Otto	WW Treatment II	07/15/2008
101442	Kenneth R Jones	WW Treatment II	09/22/2008
26931	David L Reed	WW Treatment III	04/22/2008
27004	Donnie J Creech	WW Treatment III	01/22/2008
28586	Roy L Freeman	WW Treatment III	04/08/2008
28687	Ricky N Thomas	WW Treatment III	09/23/2008
29144	Charles D Keith	WW Treatment III	09/23/2008
30881	Gary M Coyle	WW Treatment III	04/08/2008
32080	Willie J Lewis	WW Treatment III	09/23/2008
32851	Gary K Long	WW Treatment III	06/23/2008
33207	John Ranburger	WW Treatment III	04/08/2008
44842	Jason W Henderson	WW Treatment III	06/23/2008
45373	David L West	WW Treatment III	04/22/2008
49867	Richard J Jewett	WW Treatment III	06/23/2008
54705	Timothy E Anderson	WW Treatment III	01/22/2008
77313	Ricky E Dearing	WW Treatment III	04/08/2008
78626	Brett N Gillum	WW Treatment III	09/23/2008
79307	Adam B Smither	WW Treatment III	09/23/2008
79613	Eric M White	WW Treatment III	04/22/2008
81646	Andrew S Tarter	WW Treatment III	06/23/2008
81658	Johnie R Skipworth	WW Treatment III	06/23/2008
83308	James A Skinner	WW Treatment III	11/12/2008
84369	Kenneth D Hogsten Jr.	WW Treatment III	04/08/2008
99407	David A Casebeer	WW Treatment III	04/03/2008
100215	William B Crider	WW Treatment III	05/22/2008
29529	Christopher W Robinson	WW Treatment IV	07/23/2008
31007	Gary L King	WW Treatment IV	04/08/2008
31173	Russell J Music Jr	WW Treatment IV	04/22/2008
46327	Charlotte W Lyvers	WW Treatment IV	09/23/2008
49001	Heather M Stringfield	WW Treatment IV	06/23/2008
53709	Christopher D Cummins	WW Treatment IV	11/12/2008
99288	Dennis R Feichtner	WW Treatment IV	04/02/2008
102114	Peter N Corsaro	WW Treatment IV	10/28/2008

Congratulations to all of our new licensees!

Remember, keep your license up-to-date. Complete the necessary continuing education hours each renewal period and renew your license by the expiration date on your wallet card.

Operators are also required to carry their wallet cards with them when they are working at their facility. Your certificate should also be posted at the facility.

In future newsletters, the list of new and upgraded licenses will be posted quarterly.

E-mail List

Did you know that you can receive announcements, newsletters and other programmatic information through e-mail? This is a new service offered by the Certification and Licensing Program and you, too, can be added to the distribution list by calling 1-800-926-8111 ext. 652 or by e-mailing Julia.Kays@ky.gov.

Certification Board News

Wastewater Board Member Appointments

Dennis Gumbert and David Pedigo have been reappointed to the Kentucky Board of Certification of Wastewater System Operators by the governor. Mr. Gumbert will serve as one of five operator representatives and Mr. Pedigo serves as the industrial operator representative for the board. Their terms will expire on Aug. 31, 2011. Aaron Keatley, director of the Division of Compliance Assistance, was also appointed to the board to serve as the nonvoting member representing the cabinet.

Board Member Profiles

Each newsletter will profile two board members.

Dillard Griffin

Dillard Griffin serves as the chairperson for the Kentucky Board of Certification of Drinking Water Treatment and Distribution System Operators. Mr. Griffin serves in the role of the municipality representative. He currently works at Kentucky American Water in Lexington and holds Class IVA and IVD licenses. Mr. Griffin has served on the board since 1993.

Dennis Gumbert, Chairperson

Dennis Gumbert serves as the chairperson for the Kentucky Board of Certification of Wastewater System Operators. Mr. Gumbert serves in the role of operator representative. He is employed by the Greenup County Environmental Commission and holds a Class III wastewater license. He lives in Worthington with his wife and daughter.

Board Meeting Schedule

Both boards meet monthly at 300 Fair Oaks Lane in Frankfort, Ky. The meeting dates for each board can be found on our Web site at www.dca.ky.gov/certification. All operators are invited to attend.

Approval of Courses for Continuing Education Credit

- One of the activities of the certification boards is to review requests from outside vendors for continuing education hours credit for their courses.
- Trainers that would like to advertise their courses as "approved by the board" should submit a completed application and the required supporting documentation to the Certification and Licensing Program office prior to the class. The board reviews each request on a case-by-case basis. If the board determines that the course presented will contribute to the competency of certified operators in the performance of their duties, the board may approve the course for continuing education hours.
- Approvals for courses are valid for two years. After two years if the course is still going to be offered to operators, a request must be made in writing to the appropriate certification board.
- Individual operators may also request approval of courses for which they would like to receive continuing education credit. The same process applies to individual requests as to requests from training providers.
- It is suggested that the courses be approved prior to completion of the course in order to ensure that the hours will be approved for continuing education.
- The form to apply for approval of a class for continuing education is available on our Web site at www.dca.ky.gov/certification. Follow the link to the department's forms page. For additional information regarding the approval of courses for continuing education credit, contact Lisa Butler at lisa.butler@ky.gov or by calling 1-800-926-8111, ext. 317.

Look for the next issue in April 2009

Division of Compliance Assistance
Certification and Licensing Branch
300 Fair Oaks Lane
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DCA

Kentucky Division of Compliance Assistance

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